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M & O Section
Project 32

MOE #6
5 October 1956

MAINTENANCE ORDER (ENGINEERING)

To: All Maintenance Personnel

Subject: Drift Sight

MAINTENANCE MOE SAYS:

Visiting trips by PECO's Drift Sight Engineer and their new roving field Engineer, [REDACTED], have uncovered a few abuses and mis-uses of this relatively delicate optical equipment. As a result of field experience to date, some engineering changes are in the works, several Service Bulletins have been issued, and a few maintenance tips are herewith offered.

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As to Service Bulletins, the recommendation for flushing per SB No. 152-0022-1 should greatly reduce icing and fogging problems. The replacement of flexible shaft adaptors per SB No. D-1 should eliminate binding troubles at the coupling. There have been reports of flexible shaft binding even though the shaft adaptor had been installed. This type of binding has been traced to the flexible cable routing within the aircraft. Excessively sharp bends in the flexible cable will cause binding. A new routing, giving minimum bending, is under consideration by the aircraft people. When the new route is established, field fixes will be made by the aircraft people.

The yellow filters which have been removed will be replaced with a clear plastic one, made of tough abrasion resistant CR-39 plastic. These are now in process of manufacture. Extra plastic eyepiece lenses are also being made to replace those damaged when the yellow filter was removed. In several instances, the lens retainer is so over-tightened that the vertices of the two lenses were pressed together, forming a flat spot approximately 1/2 inch in diameter. This is the area used exclusively by the sextant, and seriously affects the image magnification as viewed by that instrument. The replacement lenses will be provided with a special spacing arrangement so that this error will not be possible.

The clear plastic filter will protect these lenses from scratches and abrasions due to cleaning, etc. The placement of the filter and replacement of plastic lenses when available, should be done only by qualified maintenance personnel trained by PECO to maintain the equipment. In cases where lenses were squeezed together to form a flat spot, both lenses will have to be replaced.

Of operator interest are several engineering and design improvements now in process. A new, rotatable drift sight scale over the front of the eyepiece has proven very useful in training tests and quantity production to equip all sights is underway. Sharpening of the scanning prism edge to eliminate the blurry line in the field of vision is being done

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at the PECO factory on a rotation basis. Eventually, all sights will be returned for this rework as replacements are available. At the same time the prisms are corrected, a new reticle with a broken center mark will be installed to replace the present one.

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